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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/273,448

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SHINGO OHKAWA

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EXAMINER

NGO, HUYEN LE

ART UNIT

PAPER NUMBER

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MAIL DATE

DELIVERY MODE

09/26/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/273,448	Applicant(s) OHKAWA, SHINGO	
	Examiner Julie-Huyen L. Ngo	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-22, 25 and 28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-22, 25 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The amendments filed in February 21st, 2003, September 10, 2004, December 13th, 2006, August 1st, 2007, October 1st, 2007 and June 27, 2008 are objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The amended description that is not supported by the original disclosure is as follows and repeated for Applicant's attention:

Amendments to SPECIFICATION:

Filed September 10, 2004:

Please REPLACE the paragraph beginning at page 8, line 16, with the following paragraph:

“As indicated with circle C in Fig. 1, each of the projection rows include a pair of slopes 9A, 9B running approximately in parallel with respect to the incidence end face 7B1. Each pair of slopes is directly connected to give a triangular-like cross section to each projection row. The slopes 9A mainly receive light from fluorescent lamp 1 1A and slopes 9B mainly receive light from fluorescent lamp 11B. This prism sheet 9 modifies directivity regarding in a plane perpendicular to the incidence end face(s) 7B1 (and 7A1). Detail of modifying effect is described later. Output light from the prism sheet 9 irradiates a LCD panel LP via a light diffusion plate 10.”

Filed December 13th, 2006:

After page 12, line 15, please insert:

“The slopes 9A mainly receive light from said fluorescent lamp 11B and the slopes 9B mainly receive light from the fluorescent lamp 11A.”

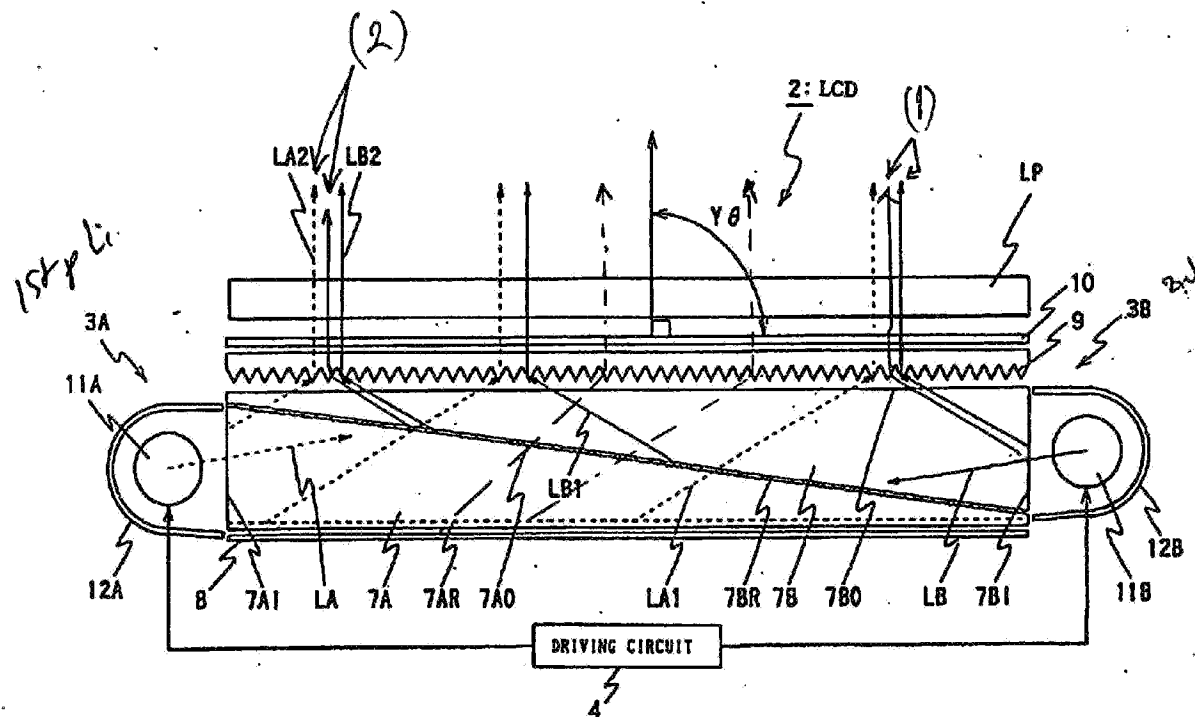
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Filed August 1st, 2007

Please AMEND the description previously added after page 12, line 15 as follows:

“The slopes 9A mainly receive and reflect light from said fluorescent lamp 11B and the slopes 9B mainly receive and reflect light from the fluorescent lamp 11A..”

Although, Figures 2 and 6 of this application only shows that a prismatic light control member 9 provided with a great number of pairs of first and second slopes disposed along said second emission face of the second guide plate so that said first slopes only receive light from said First primary light source 11A and reflect light from said Second primary light source 11B, said second slopes receive light from said Second primary light source 11B and reflect light from said First primary light source 11A. The light rays (1) & (2), **however**, can be receivable in ALL directions (See marked up of Figure 2 below also attached to previous Office action for other possible light rays).



Furthermore, there is nothing to avoid the first and second slopes from receiving light from BOTH the First 11A and the second 11B primary light sources. The set forth above amendments to the specification regarding the function of the first and second slopes “**mainly**” receive and reflect light from the respective primary light source can not be entered and considered to be NEW MATTER added to the original disclosure.

However, the Applicant has not provided any criticality for the first and second slopes mainly to receive and reflect light from the respective primary light sources as amended in claims 13 and 28.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 13-22, 25 and 28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In the last clause of claims 13 and 28, the recitation calling for “... *said first slopes mainly receive light from said first primary light source and reflect light from said second primary light source; and said second slopes mainly receive light from said second primary light source and reflect light from said first primary light source,*” constitutes new matter because of the limitation “*mainly*,” which was not support by the original disclosure.

All claims that are depended from the above-rejected claims and are not specifically discussed above are rejected as bearing the defects of the claims from which they depend.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

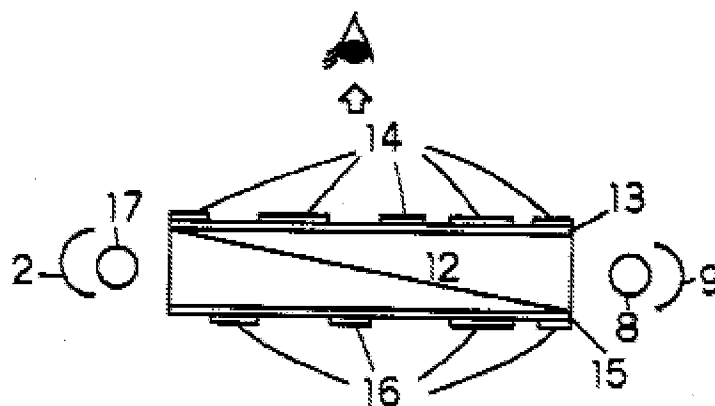
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13-16, 25 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okuda et al. (US5963280A) in view of Oyama et al. (US5808708A) and further in view of Miyashita et al. (US6011602A).

With respect to claims 13, 25 and 29 Okuda et al. teach (Fig. 4, col. 16, line 62 to col. 17, line 17) a liquid crystal display including a liquid crystal display panel and a surface light source device of side light type for backlighting of the liquid crystal display panel, said surface light source device comprising:

F i g . 4



- a first guide plate

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- a first primary light source 17 with red color disposed beside the first guide plate
- a second guide plate
- a second primary light source 8 with blue color disposed beside the second guide plate
- said first guide plate having two major faces to provide a first emission face and a first back face and having a minor face to provide a first incidence end face which is supplied with illumination light from said first primary light source 17
- said second guide plate having two major faces to provide a second emission face and a second back face and having a minor face to provide a second incidence end face which is supplied with illumination light from said second primary light source 8
- said first guide plate and said second guide plate being laminatedly arranged so that said second back face extends along said first emission face
- said first incidence end face and said second incidence end face being located oppositely to each other across said laminatedly arranged guide plates,
- a light control member (the scattering layers 14 and 16) to control directivity of output illumination light is disposed along said second emission face.

However, Okuda et al. fail to disclose the following features recited in the following claims:

Claims 13 and 28: said light control member is a prismatic light control member having a great number of pairs of first and second slopes to control the directivity

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of output illumination light is disposed along said second emission face so that ***said first slopes mainly receive light from said first primary light source and reflect light from said second primary light source; and said second slopes mainly receive light from said second primary light source and reflect light from said first primary light source***

Claim 25: said light control member is a prismatic light control member having a great number of pairs of first and second slopes disposed along said second emission face to control directivity of output illumination light so that said first slopes receive light from said first primary light source and said second slopes receive light from said second primary light source.

Claims 13 and 25: a driving circuit to drive the first primary light source and the second primary light source

Miyashita et al. teach (at least Figs. 23-25) forming a prismatic light control member 321 with a great number of pairs of first and second slopes to control directivity of output illumination light, said prismatic light controller member is disposed along an emission face of the light guide 307. The First slopes mainly receive light from the left side of the light control member 321 or from the light source 322 and reflect light from the Right side of the light control member 321, the second slope mainly receive light from the Right side of light guide and reflect light 305 from the Left side of the light control member 321 or from the light source 322 (see figure 25 below) to control the

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directivity of the light illuminated from the light guide 311 for improving the frontal illumination performance.

FIG. 23

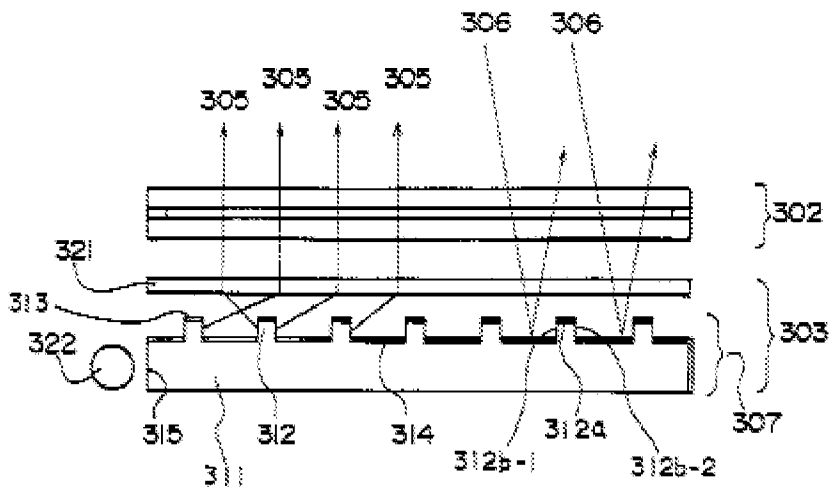


FIG. 24

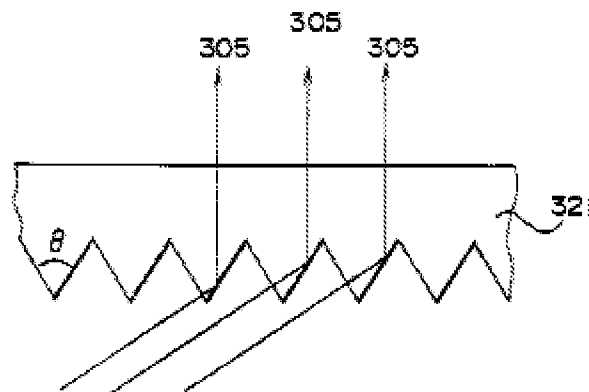
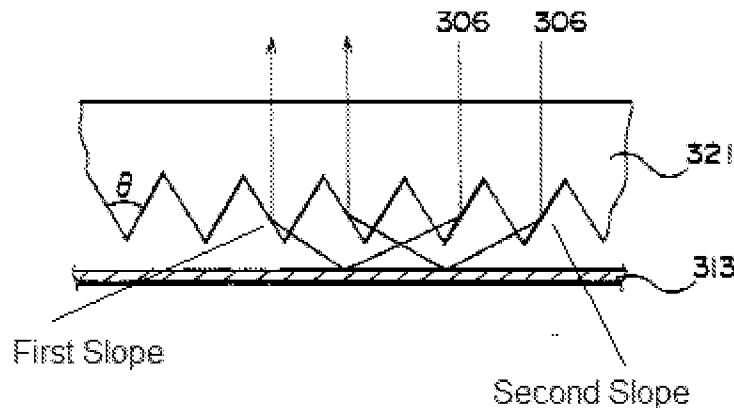


FIG.25



Therefore, it would have been obvious for one of ordinary skill in the art to modify Okuda surface light source device with Miyashita's prismatic light control member 321 having a great number of pairs of first and second slopes to control directivity of output illumination light, and to dispose said prismatic light control member along the second emission face of Okuda's second guide plate so that the first slopes mainly receive light from the first primary light source 17 and reflect light from the second/third primary light source 8; and the second slopes mainly receive light from the second primary light source 8 and reflect light from the first primary light source 17 for improving the frontal illumination performance of Okuda light source device, as taught by Miyashita et al.

Although Okuda et al. do not clearly disclose a driving circuit to drive the first primary light source and the second primary light source. One of ordinary skill in the art would have known that there must be a driver circuit to drive/control the light sources for adjusting the intensity of output light from the light source or for selectively outputting a

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specific color display as evidenced by Oyama with the control circuit 16 for controlling the light sources 3 on the back surface of the light guiding plates 4114 (Figs. 2, 3 and 8, col. 1, lines 26-33, col. 7, lines 24-27 and col. 11, lines 26-28).

Therefore, It would have been obvious for one of ordinary skill in the art to employ a driver circuit such as the control circuit 16, as taught by Oyama, to drive or control the first primary light source 17 and the second primary light source 8 in the surface light source device of Okuda LCD for adjusting the intensity of output light from the light source or for selectively outputting a specific color display.

With respect to claim 14, it would have been obvious for one of ordinary skill in the art to selectively turning off one of the first and second primary light sources to adjust the intensity of light output or for selecting a specific color display. Therefore, the driver circuit in Okuda in view of Oyama LCD device would obviously capable of turning off only one of the first and second primary light sources.

With respect to claims 15 and 16, Okuda et al. teach (Fig. 4) that said first and second guide plates have wedge-shaped cross sections so that said first and second incidence end faces are located at thicker ends of the cross sections, respectively.

Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okuda et al. in view of Oyama et al. and Miyashita et al. as applied above to claims 13-16, and further in view of Ohkawa (US 5997148).

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Okuda et al. in view of Oyama and Miyashita LCD device fails to disclose the features recited in claims 17-20.

Ohkawa teaches (at least in Figs. 1 and 2 and col. 5, line 32-col. 6 line 14) forming a great number of projection rows 102 running approximately at right angles with respect to the incidence end face 12A on the lower edge/back face 12B of a guide plate 12 for preventing the reflective appearance have a possibility to influence the directivity of characteristic of emission light from the emission surface 12C of light guide 12. Doing so would suppress the appearance of bright light entering the vicinity of the lower edge E1 and provides output light having high uniformity.

Therefore, it would have been obvious for one of ordinary skill in the art to form a great number of projection rows running approximately at right angles with respect to the first incidence end face on the first back face of the first light guide in Okuda in view of Oyama and Miyashita LCD device for suppressing the appearance of bright light entering the vicinity of the lower edge and provides output light having high uniformity, as taught by Ohkawa.

Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okuda in view of Oyama and Miyashita et al. as applied to claim 13, and in further view of Arai (US6049649).

Okuda et al. in view of Oyama and Miyashita LCD device fails to disclose the features recited in claims 21 and 22.

With respect to claim 21, a prism sheet (light control member) is conventionally used to modify the preferential propagation direction such as frontal direction of output light in a surface light source device such as the light control members 4/14 disclosed by Arai (figures 3,4 and 11-18). This light control member is provided with slopes on the inner reflection surface facing the emission surface of the guide light to modify the directivity of illumination output light from the light guide and for uniform illuminating of the output light.

Therefore, it would have been obvious for one of ordinary skill in the art to employ a light control member having the slopes provided on the inner reflection surface in Okuda in view of Oyama and Miyashita LCD device to modify the directivity of illumination output light so that illumination output light originated from any one of the first and second primary light source is directed to the frontal direction with respect to the second emission face, as taught by Arai.

With respect to claims 22, the light control member employed in Okuda LCD in view of Oyama, Miyashita and Arai as applied to claim 21 above would obviously has an inner face provided with a great number of projection rows running approximately parallel with respect to the second incidence end face, wherein each of said projection rows including a pair of first and second slopes for modifying the directivity of illumination output light from the second emission surface of the second guide plate.

Response to Arguments

Applicant's arguments filed on June 27, 2007⁸ have been fully considered; however, Miyashita et al. prismatic array/light control member (321) as shown in Figures 23 and 25 above can still meet the recitations amended in the claims 13 and 28 as set forth above.

Applicant's ONLY arguments are:

1) Okuda teaches a side light arrangement having two pairs of light guide plates and primary light sources (Okuda, Fig. 4). However, there is no receiving/reflecting of light as claimed for example in claim 13, which recites a prismatic light control member provided with a great number of pairs of first and second slopes to control directivity of output illumination light is disposed along said second emission face so that said first slopes mainly receive light from said first primary light source and reflect light from said second primary light source and said second slopes mainly receive light from said second primary light source and reflect light from said first primary light source.

2) Ohyama teaches a prismless arrangement. However, this reference does not teach the above-discussed features.

Examiner's responses to Applicants' ONLY arguments are:

1) In response to applicant's argument that Okuda and Oyama (Ohyama) do not show certain features of applicant's invention, it is noted that the features upon which applicant relies ,i.e., "*said first slopes mainly receive light from said first primary light source and reflect light from said second primary light source and said second slopes mainly receive*

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light from said second primary light source and reflect light from said first primary light source to control directivity of output illumination light from said second emission face," as amended in claims 13 and 28 were not recited in the rejected claims 13 and 28.

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

However, Okuda et al. was used as a primary reference to show that a typical side-light arrangement having two pairs of light guide plates and 2 primary light sources 17 and 8, as shown in Fig. 4 below, to combine with the prismatic light control member (321 in figure 25 below) in Miyashita et al. device to achieve the receiving/reflecting of light as claimed for example in claims 13 and 28.

Note that once Miyashita's prismatic light control member 321 is disposed along the second emission face of Okuda's second guide plate (see figures 4 of Okuda and at least Figure 25 of Miyashita below), the First slopes would mainly received light from said first primary light source 17 and reflect light from the second/third primary light source 8; the said Second slopes would mainly received light from said second primary light source 8 and reflected light for mthe Fist primary light source 17 for improving the frontal illumination performance in Okuda surface light source device, as taught by Miyashita et al.

FIG. 25

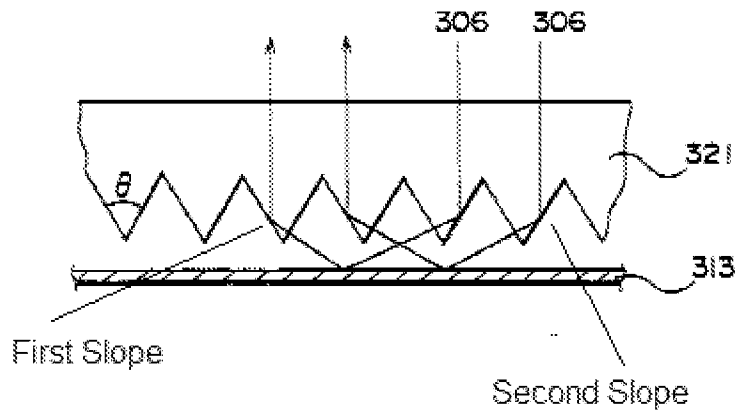
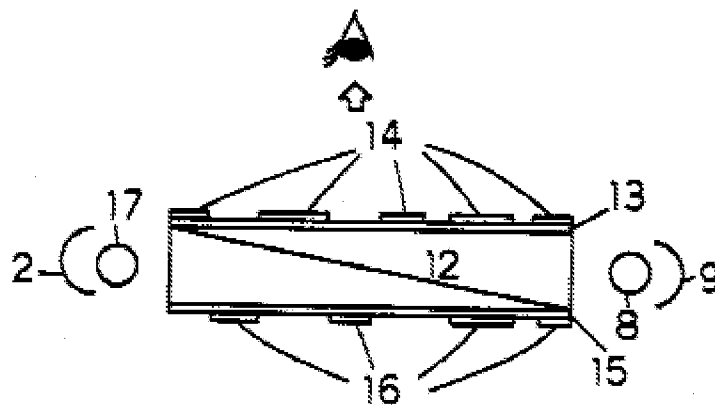


Fig. 4



Therefore, Okuda surface light source device as modified by Miyashita would obviously capable of performing the claimed features recited in claims 13 and 28 for having *said first slopes receive light from said first primary light source and reflect light from said second primary light source 8 and said second slopes receive light from said second primary light source and reflect light from said first primary light source 17.*

2) Oyama merely used to apply his teaching in the modified device of Okuda in view of Miyashita et al. for having a driving circuit /control circuit 16 for controlling a light source on a back surface of a light guiding plates, while Miyashita et al. has been applied in combination with Okuda et al for achieving the receiving/reflecting of light as claimed in claims 13 and 28.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Julie-Huyen L. Ngo whose telephone number is (571) 272-2295. The Examiner can normally be reached on M-Thursday.

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If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Mr. David Nelms can be reached at (571) 272-1787.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1562.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*/Julie -Huyen L. Ngo/
Primary Examiner
Art Unit 2871*